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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/517,246

Filing Date: December 07, 2004

Appellant(s): MUTH, MATTHIAS

Thomas H. Ham
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 02 February 2010 appealing from the Office action mailed 02 September 2009.

(1) Real Party In Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:
Claims 1-14 stand rejected and are pending in the application.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal.

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6154061	Boezen et al.	5-1999
5475687	Markkula, Jr. et al.	7-1993
6832251	Gelvin et al.	10-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is a method claim, but it does not construe a process.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Claim 4 does not describe the required step for performing a specified function as required by the sixth paragraph of 35 U.S.C. 112.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Dependent claim 9 is a product claim which depends on Claim 1, a method claim.

Claims 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Dependent Claims 10-13 are product claims which depends on Claim 9, which depends on Claim 1, a method claim.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Dependent Claim 14 is a product claim which depends on Claim 13, which depends on Claim 9, which depends on Claim 1, a method claim.

Claims 1-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boezen et al. (US 6154061 A) in view of Markkula et al. (US 5475687 A).

Consider claim 1. Boezen et al. discloses a method comprising a controller area network bus driver with output signals comprising a signal level of the data traffic on a system in which all the nodes and/or all the users of the system are addressed and/or activated by the signal level of the data traffic on the system ("Such a bus driver is known from European Patent Specification EP 0 576 444 and is used in so-called Controller Area Network (CAN) bus systems which are used, inter alia, in cars. For this, use is made of transceivers (transmitter/receiver), information being transmitted as a differential signal via a two-wire bus having its two wires connected to the first and the second bus terminal. The transmitter supplies data signals to the bus and is from now on referred to as bus driver. The two bus wires are usually referred to as CANH and CANL and are connected to a pull-down resistor and a pull-up resistor at the receiver side. The voltages across the two bus wires have opposite polarities, as a result of which the spurious electromagnetic fields radiated by the two wires cancel one another. In the case of a high degree of symmetry the bus wires can take the form of a twisted pair and no expensive shielding is necessary. For this purpose the symmetry of the signals on the two bus wires should be as high as possible.") column 1 lines 25-43) and symmetrical output signals ("CAN bus driver with symmetrical differential output signals") title, abstract). However, Boezen et al. fails to disclose a method of subnetting,

a serial databus, or reduced consumption states. Markkula et al. discloses a network and intelligent cell for providing sensing, bidirectional communications and control comprising a serially networked system, in particular a serial databus system ("The use of the repeater CRC calculation associated with the field 99 and the use of the circular list will prevent repeating of a previously rebroadcast packet. Note that even if an announcer continually rebroadcasts the same sequence of messages, for example, as would occur with the continuous turning on and turning off of a light, a cell designated as a repeater will rebroadcast the same message since the packet containing messages appears to be different. This is true because the random number sent with each of the identical messages will presumably be different. However, in the instance where a cell receives the same message included within the same field 99 (same random number), the packet with its message will not be rebroadcast. This is particularly true for probe packets. Thus, for the establishment of groups discussed above, the broadcast probe packets quickly "die out" in the network, otherwise they may echo for some period of time, causing unnecessary traffic in the network.") column 15 lines 63-67 and column 16 lines 1-14 ("Each of the cells includes a timing generator (RC oscillator) for providing a 16 mHz signal. This signal is connected to a rate multiplier 178 contained in the I/O section (FIG. 18). The multiplier 178 provides output frequencies to each I/O subsection. This multiplier provides a frequency f.sub.0 equal to: ##EQU1## The loaded value is a 16 bit word loaded into a register of a rate multiplier 178. The rate multiplier comprises four 16-bit registers and a 16-bit counter chain. Four logic circuits allow selection of four different output signals, one for each subsection. Two bus cycles

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(8 bits each) are used to load the 16 bit words into the register of the rate multiplier 178. As can be seen from the above equation, a relatively wide range of output frequencies can be generated. These frequencies are used for many different functions as will be described including bit synchronization. The output of the multiplier 178 in each of the subsection is coupled to an 8 bit counter 179. The counter can be initially loaded from a counter load register 180 from the data bus of the processors. This register can, for example, receive data from a program. The count in the counter is coupled to a register 181 and to a comparator 182. The comparator 182 also senses the 8 bits in a register 183. The contents of this register are also loaded from the data bus of the processors. When a match between the contents in the counter and the contents of register 183 is detected by comparator 182; the comparator provides an event signal to the state machine of FIG. 19 (input to multiplexers 190 and 191). The contents of the counter 179 can be latched into register 181 upon receipt of a signal from the state machine (output of the execution register 198 of FIG. 19). The same execution register 198 can cause the counter 179 to be loaded from register 180. When the counter reaches a full count (terminal count) a signal is coupled to the state machine of FIG. 19 (input to multiplexers 190 and 191)." column 32 lines 20-61), a subnetwork operation ("Subnetwork: A subnetwork comprises all the cells having the same system identification (system ID). For example, all the cells in a single family home may have the same system ID. Therefore, the channels of FIG. 4 may be part of the same subnetwork in that they share the same system ID. Full Network: A full network may comprise a plurality of subnetworks each of which has a different system ID; a communications processor is

used for exchanging packets between subnetworks. The communications processor translates packets changing their system ID, addressing and other information. Two factory buildings may each have their own system ID, but control between the two is used by changing system IDs. (The word "network" is used in this application in its more general sense and therefore refers to other than a "full network" as defined in this paragraph.) column 7 lines 4-19), to full network operation, characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined, especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system ((In many networks using the synchronous transmission of digital data, encoding is employed to embed timing information within the data stream. One widely used encoding method is Manchester coding. Manchester or other coding may be used to encode the packets described above, however, the coding described below is presently preferred. A three-of-six combinatorial coding is used to encode data for transmission in the presently preferred embodiment. All data is grouped into 4 bit nibbles and for each such nibble, six bits are transmitted. These six bits always have three ones and three zeroes. The transmission of three ones and three zeroes in some combination in every six bits allows the input circuitry of the cells to quickly become synchronized (bit synch) and to become byte synchronized as will be discussed in connection with the I/O section. Also once synchronized (out of hunt mode) the transitions in the incoming bit stream are used to maintain synch. The righthand column of FIG. 9 lists the 20 possible combinations of 6 bit patterns where 3 of the bits are ones and 3 are zeroes. In the

lefthand column, the corresponding 4 bit pattern assigned to the three-of-six pattern is shown. For example, if the cell is to transmit the nibble 0111, it is converted to the bit segment 010011 before being transmitted. Similarly, 0000 is converted to 011010 before being transmitted. When a cell receives the 6 bit patterns, it converts them back to the corresponding 4 bit patterns. There are 20 three-of-six patterns and only 16 possible 4 bit combinations. Therefore, four three-of-six patterns do not have corresponding 4 bit pattern assignments. The three-of-six pattern 010101 is used as a preamble for all packets. The flags for all packets are 101010. The preamble and flag patterns are particularly good for use by the input circuitry to establish data synchronization since they have repeated transitions at the basic data rate. The two three-of-six patterns not assigned can be used for special conditions and instructions. Accordingly, a cell prepares a packet generally in integral number of bytes and each nibble is assigned a 6 bit pattern before transmission. The preamble and flags are then added. The circuitry for converting from the 4 bit pattern to the 6 bit patterns and conversely, for converting from the 6 bit patterns to the 4 bit patterns is shown in FIGS. 14 and 15.") column 16 lines 17-59) in which at least one node and/or at least one user of the system is in a state of reduced current consumption and is not addressed and/or not activated by the signal level of the data traffic on the system (" This method is used in a network in which group and cell ASCII names have been assigned. The user commands the grouping device to wait for the next group announcement. Then the user stimulates the announcer in the group of interest. For example, if the announcer is a light switch, the user throws the switch. The grouping device hears the announcement

packet and extracts the group ID from it. The user may verify that this group ID is for the desired group by causing the grouping device to send packets to all of the group listeners commanding them to toggle their outputs. The user verifies that it is the desired group by observing the actions of the listener cells (for example, if the group consists of lighting controls, the light flashes). Now using that group ID, the grouping device broadcasts a packet to the group requesting that each cell reply with its cell name until the cell of interest is found. The user selects that name and the grouping device, knowing that cell's ID, can proceed with the group assignment process. If a user elects, the ID of the cell may be verified before proceeding with the grouping procedure. The following procedure is used to verify that the ID is for the target cell. If the selected cell is an announcer, the grouping device prompts the user to activate the announcer by stimulating its input. For example: if the cell is attached to a light switch, the user turns the switch on and off. The grouping device is then able to discover the group address and member number of the cell. If the selected cell is a listener, the grouping device sends packets to the cell (using the group and member numbers, for addressing) commanding it to toggle its output. For example, if the cell controls a light, the light will flash on and off. This allows the user to verify that he has selected the correct cell.") column 12 lines 26-60).

Boezen et al. discloses a prior art method comprising a controller area network bus driver with output signals comprising a signal level of the data traffic on a system in which all the nodes and/or all the users of the system are addressed and/or activated by

the signal level of the data traffic on the system and symmetrical output signals upon which the claimed invention can be seen as an improvement.

Markkula et al. teaches a prior art comparable network and intelligent cell for providing sensing, bidirectional communications and control comprising a serially networked system, in particular a serial databus system, a subnetwork operation, to full network operation, characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined, especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system in which at least one node and/or at least one user of the system is in a state of reduced current consumption and is not addressed and/or not activated by the signal level of the data traffic on the system.

Thus, the manner of enhancing a particular device (network and intelligent cell for providing sensing, bidirectional communications and control comprising a serially networked system, in particular a serial databus system, a subnetwork operation, to full network operation, characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined, especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system in which at least one node and/or at least one user of the system is in a state of reduced current consumption and is not addressed and/or not activated by the signal level of the data traffic on the system) was made part of the

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ordinary capabilities of one skilled in the art based upon the teaching of such improvement in Markkula et al. Accordingly, one of ordinary skill in the art would have been capable of applying this known improvement technique in the same manner to the prior art method comprising a controller area network bus driver with output signals comprising a signal level of the data traffic on a system in which all the nodes and/or all the users of the system are addressed and/or activated by the signal level of the data traffic on the system and symmetrical output signals of Boezen et al. and the results would have been predictable to one of ordinary skill in the art, namely, one skilled in the art would have readily recognized a switching circuit.

Consider claim 2, as applied to claim 1. Boezen et al., as modified by Markkula et al., discloses a method characterized in that the signal level pattern does not otherwise occur in the data traffic (Markkula et al., column 5 lines 19-38).

Consider claim 3, as applied to claim 1. Boezen et al., as modified by Markkula et al., discloses a method characterized in that the signal level pattern is detected by at least one node in the reduced current consumption state and/or by at least one user in the reduced current consumption state (Markkula et al., column 12 lines 26-60).

Consider claim 4. Boezen et al., as modified by Markkula et al., discloses a serially networked system (Markkula et al., column 15 lines 63-67 and column 16 lines 1-14 and column 32 lines 20-61), which is configured to be changed over from

subnetwork operation (Markkula et al., column 7 lines 4-19), in which at least one node and/or at least one user of the system is in a state of reduced current consumption and cannot be addressed and/or activated by the signal level of the data traffic on the system (Markkula et al., column 12 lines 26-60), to full network operation, in which all the nodes and/or all the users of the system may be addressed and/or activated by the signal level of the data traffic on the system (Boezen et al., column 1 lines 25-43), characterized in that the changeover from the subnetwork operation to the full network operation takes place in the event of the detection of at least one defined, especially continuous and/or especially symmetrical (Boezen et al., title and abstract) signal level pattern in the data traffic on the system (Markkula et al., column 16 lines 17-59).

Consider claim 5, as applied to claim 4. Boezen et al., as modified by Markkula et al., discloses a system characterized in that the signal level pattern does not otherwise occur in the data traffic (Markkula et al., column 5 lines 19-38).

Consider claim 6, as applied to claim 4. Boezen et al., as modified by Markkula et al., discloses a system characterized in that the signal level pattern is detected by at least one node and/or user in the reduced current consumption state (Markkula et al., column 12 lines 26-60).

Consider claim 7, as applied to claim 4. Boezen et al., as modified by Markkula et al., discloses a system characterized in that the system comprises at least one Controller Area Network (CAN) bus (Boezen et al., column 1 lines 25-43).

Consider claim 8, as applied to claim 4. Boezen et al., as modified by Markkula et al., discloses a system characterized in that the user takes the form of at least one system chip unit, in particular at least one system chip unit, and/or at least one microcontroller unit provided for carrying out at least one application (Markkula et al., column 17 lines 13-48).

Consider claim 9, as applied to claim 1. Boezen et al., as modified by Markkula et al., discloses a transceiver unit characterized in that the transceiver unit is connected to at least one Controller Area Network (CAN) bus and is in communication with at least one microcontroller unit which is provided to carry out at least one application (Markkula et al., column 17 lines 13-48).

Consider claim 10, as applied to claim 9. Boezen et al., as modified by Markkula et al., discloses a transceiver unit characterized by at least one control logic associated with the transceiver unit and/or implemented in the transceiver unit (Markkula et al., Figure 11).

Consider claim 12, as applied to claim 9. Boezen et al., as modified by Markkula et al., discloses a chip unit, in particular a system chip unit, for addressing and/or activating at least one microcontroller unit which is provided to carry out at least one application and which is associated with at least one Controller Area Network (CAN) bus characterized by at least one transceiver unit and at least one voltage regulator, which is connected to at least one battery unit, and which is in communication with at least one transceiver unit, the voltage regulator being configured to supply a voltage to the at least one microcontroller unit (Boezen et al., column 1 lines 13-24).

Consider claim 13, as applied to claim 9. Boezen et al., as modified by Markkula et al., discloses a microcontroller unit provided to carry out at least one application and associated with at least one Controller Area Network (CAN) bus, which microcontroller unit is to be supplied with a voltage only if at least one defined, in particular continuous and/or in particular symmetrical signal level pattern is detected in at least one incoming message associated with at least one application and occurring on the databus, by at least one transceiver unit (Boezen et al., column lines 6-23).

Consider claim 14, as applied to claim 13. Boezen et al., as modified by Markkula et al., discloses a microcontroller unit characterized in that the microcontroller unit may be activated by the transceiver unit (Markkula et al., Figure 11).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boezen et al. (US 6154061 A) in view of Markkula et al. (US 5475687 A) and in further view of Gelvin et al. (US 6832251 B1).

Consider claim 11, as applied to claim 9. Boezen et al., as modified by Markkula et al., discloses a voltage regulator (Boezen et al., column 5 lines 18-27). However, Boezen et al., as modified by Markkula et al., fails to disclose a method comprising batteries. Gelvin et al. discloses a method for distributed signal processing among internetworked wireless integrated network sensors comprising batteries (column 20 lines 44-50).

Therefore, it would have been obvious for a person of ordinary skill in the art at the time the invention was made to incorporate a method for distributed signal processing among internetworked wireless integrated network sensors comprising batteries as taught by Gelvin et al. with a method comprising a controller area network and a voltage regulator as taught by Boezen et al., as modified by Markkula et al., for the purpose of mobile circuitry.

(10) Response to Argument

Applicant asserts that Claims 1, 4, 9, 10-13 and 14 do particularly point out and distinctly claim the subject matter which Applicant regards as the invention, and thus, are definite under 35 U.S.C. 112, second paragraph.

Examiner respectfully disagrees.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 is a method claim, but it does not construe a process.

Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 4 does not describe the required step for performing a specified function as required by the sixth paragraph of 35 U.S.C. 112.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant

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regards as the invention. Dependent claim 9 is a product claim which depends on Claim 1, a method claim.

Claims 10-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Dependent Claims 10-13 are product claims which depends on Claim 9, which depends on Claim 1, a method claim.

Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Dependent Claim 14 is a product claim which depends on Claim 13, which depends on Claim 9, which depends on Claim 1, a method claim.

Applicant asserts that "characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined, especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system," where the full network operation is described as "in which all the nodes and/or all the users of the system are addressed and/or activated by the signal level of the data traffic on the system." These limitations are not disclosed in the cited references of Boezen et al. and Markkula et al.

Applicant asserts that Markkula et al. does not disclose "subnetwork operation, in which at least one node and/or at least one user of the system is in a state of reduced current consumption" (emphasis added), as recited in the amended independent claim 1.

Applicant asserts that the limitations of "characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined, especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system," as recited in the amended independent claim 1. The cited passages of Markkula et al. fail to disclose any process of changing the system from a subnetwork operation to a full network operation, as defined in the amended independent claim 1.

Applicant asserts that the cited passages of Markkula et al. fail to disclose any detection of a continuous and/or symmetrical signal level pattern to change the system from a subnetwork operation to a full network operation, as defined in the amended independent claim 1.

Applicant asserts that the cited reference of Markkula et al. does not disclose the limitations of "characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined,

especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system," as recited in the amended independent claim 1.

Applicant asserts that "characterized in that the signal level pattern does not otherwise occur in the data traffic," which is not disclosed in the cited reference of Markkula et al.

Examiner respectfully disagrees.

Boezen et al. discloses a method comprising a controller area network bus driver with output signals comprising a signal level of the data traffic on a system in which all the nodes and/or all the users of the system are addressed and/or activated by the signal level of the data traffic on the system ("Such a bus driver is known from European Patent Specification EP 0 576 444 and is used in so-called Controller Area Network (CAN) bus systems which are used, inter alia, in cars ... For this purpose the symmetry of the signals on the two bus wires should be as high as possible.") Boezen et al., column 1 lines 25-43) and symmetrical output signals ("CAN bus driver with symmetrical differential output signals") Boezen et al., title, abstract). Markkula et al. discloses a network and intelligent cell for providing sensing, bidirectional communications and control comprising a serially networked system, in particular a serial databus system ("Each of the cells includes a timing generator (RC oscillator) for providing a 16 mHz signal. This signal is connected to a rate multiplier 178 contained in

the I/O section (FIG. 18).") Markkula et al., column 32 lines 20-61), a subnetwork operation ("Subnetwork: A subnetwork comprises all the cells having the same system identification (system ID).") Markkula et al., column 7 lines 4-19), to full network operation, characterized in that the system is changed over from the subnetwork operation to the full network operation through the detection of at least one defined, especially continuous and/or especially symmetrical signal level pattern in the data traffic on the system ("The three-of-six pattern 010101 is used as a preamble for all packets. The flags for all packets are 101010. The preamble and flag patterns are particularly good for use by the input circuitry to establish data synchronization since they have repeated transitions at the basic data rate ... The preamble and flags are then added. The circuitry for converting from the 4 bit pattern to the 6 bit patterns and conversely, for converting from the 6 bit patterns to the 4 bit patterns is shown in FIGS. 14 and 15.") Markkula et al., column 16 lines 17-59) in which at least one node and/or at least one user of the system is in a state of reduced current consumption and is not addressed and/or not activated by the signal level of the data traffic on the system ("The following procedure is used to verify that the ID is for the target cell. If the selected cell is an announcer, the grouping device prompts the user to activate the announcer by stimulating its input. For example: if the cell is attached to a light switch, the user turns the switch on and off. The grouping device is then able to discover the group address and member number of the cell. If the selected cell is a listener, the grouping device sends packets to the cell (using the group and member numbers, for addressing) commanding it to toggle its output. For example, if the cell controls a light,

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the light will flash on and off. This allows the user to verify that he has selected the correct cell.") Markkula et al., column 12 lines 26-60).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Mark D. Fearer/

Conferees:

/George C Neurauter, Jr./

Primary Examiner, Art Unit 2443

/Tonia LM Dollinger/

Supervisory Patent Examiner, Art Unit 2443